

The species of *Cassagnella* NAJT & MASSOUD, 1974 (Collembola, Brachystomellidae)

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Abstract. A redescription and a new combination for *Rapoportella sergioi* (NAJT 1973) is given. A new locality for *Cassagnella alba* NAJT & MASSOUD is reported, a key to the known species of *Cassagnella* NAJT & MASSOUD is enclosed.

Key words: Collembola, Brachystomellidae, *Probrachystomella*, *Rapoportella*, *Cassagnella*, redescription, South America, South Australia.

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In 1973, NAJT described *Probrachystomella sergioi* from Isla de Los Estados, Bahía Capitán Cánepa in Argentina. NAJT and MASSOUD (1974) placed this species in the genus *Rapoportella* ELLIS & BELLINGER, 1973 for the reason of unavailable name of *Probrachystomella* Rapoport, 1962 (after ELLIS & BELLINGER, 1973). In the same study, authors created a new genus *Cassagnella* with the type species *C. alba* NAJT & MASSOUD, 1974 from Argentina (Isla de Los Estados, Puerto San Juan).

We studied the type material of both species and we concluded that *Rapoportella sergioi* (NAJT, 1973) with its type of maxillae and its type of chaetotaxy, belongs also to the genus *Cassagnella* NAJT & MASSOUD, 1974.

The third species belonging to this genus is *Cassagnella anomala* (WOMERSLEY, 1933) known from South Australia.

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Cassagnella NAJT & MASSOUD, 1974

D i a g n o s i s. Habitus typical for the family Brachystomellidae. Antennal segment IV ventrally very short. Postantennal organ and ocelli present. Mandibles absent. Maxillae with two lamellae and elongated griffe with two teeth at the tip. Chaetotaxy plurichaetotic.

Cassagnella alba NAJT & MASSOUD, 1974

T y p e l o c a l i t y. South America, Argentina, Isla de Los Estados, Puerto San Juan, holotype and three paratypes, 12.v.1971, lgt. FLINT & HEVEL.

N e w l o c a l i t y. South America, Falkland Islands (Islas Malvinas), near Port Stanley, live-firing-area of Royal Marines, pitfall-traps, 15 specimens, January-February, 1985, lgt. M. VOGEL.

Cassagnella anomala (WOMERSLEY, 1933)

T y p e l o c a l i t y. South Australia, Victoria, Sassafras, December, 1931, lectotype and three paralectotypes, lgt. H. G. ANDREWARTHA.

O t h e r l o c a l i t y. South Australia, Victoria, Sherbrook, 19.iv.1931, one specimen, lgt. H. G. ANDREWARTHA.

Cassagnella sergioi (NAJT, 1973) comb. nov.

(Figs 1-6)

Probrachystomella sergioi NAJT, 1973 : 243

Rapoportella sergioi (NAJT 1973) in NAJT & MASSOUD 1974 : 368

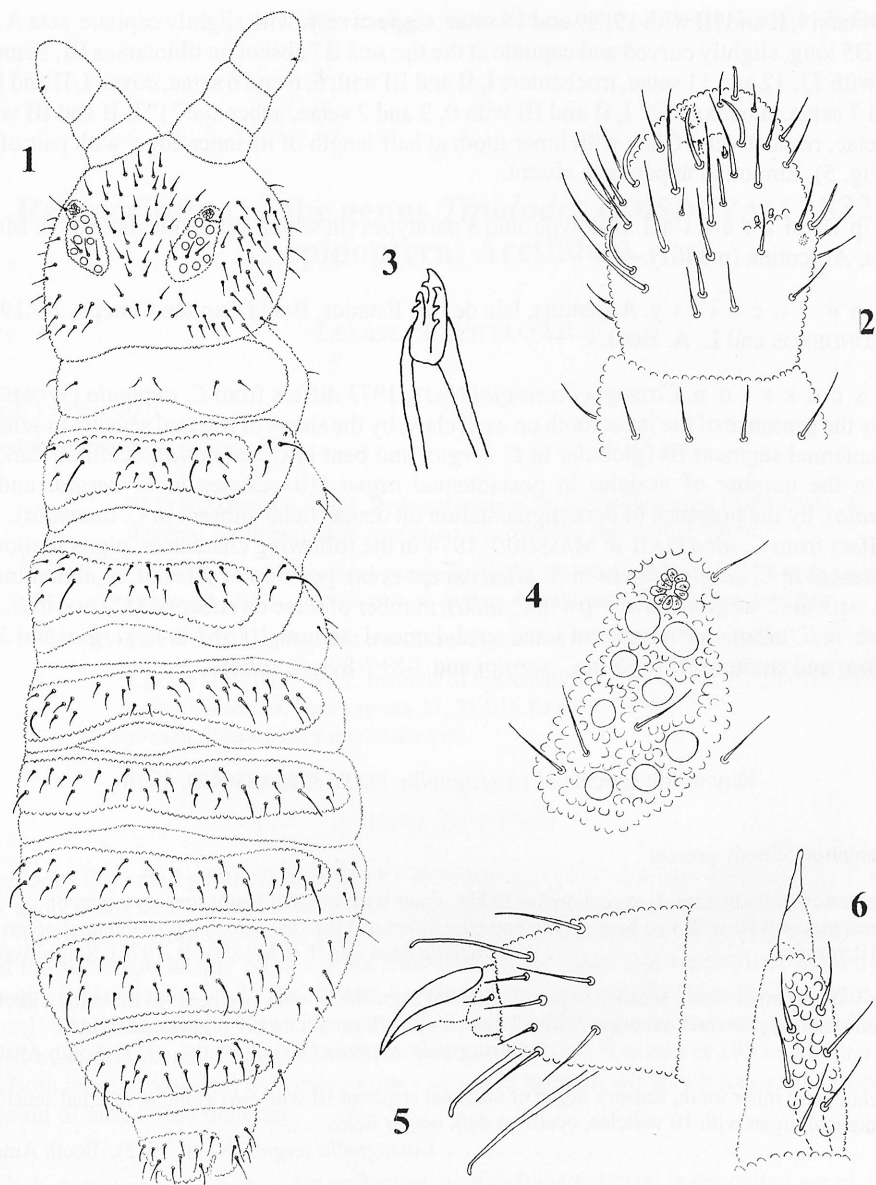
D i a g n o s i s. Habitus and buccal cone typical for the genus *Cassagnella*. Postantennal organ with 10 vesicles. 8+8 eyes present. Mesochaetae and serrated macrochaetae present, formula of sensory setae s per half tergum: 022/22211. Head with setae a0, c1, c2 and c5. Thoracic tergum I with 4+3 (in holotype), 3+3 (in paratype) setae. Furca with 6 setae on each dens. Mucro straight. Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively. Subcoxae "2" I, II and III with 0, 2 and 2 setae, subcoxae "1" I, II and III with 1, 2 and 3 setae, respectively. Each anal valve with three setae hr.

R e d e s c r i p t i o n. Colour in alcohol bluish-grey, ocular plate bluish-black. Very strongly granulated area on each tergum.

Antennae shorter than head (about 3/4 the length of head). Antennal segment I with 7 setae, antennal segment II with 12-13 setae. Antennae III and IV fused dorsally, ventral separation well marked. Sensory organ of antennal segment III consisting of: two small globular internal sensilla, two subcylindrical guard sensilla (both of the same size) and two guard setae between them; ventral microsensillum present. Antennal segment IV with rather long ordinary setae, with 6 slightly distinct subcylindrical sensilla; dorsoexternal microsensillum present, truncated subapical organite present; apical vesicle simple in deep cavity, ventral side with a few truncated setae (Fig. 2).

Postantennal organ (Fig. 4) 2.5 times larger than ocellus B, bearing 10 vesicles, each with pigmentation. Eyes 8+8. Buccal cone typical for the genus. Mandible absent, maxillae with two lamellae (with two and three teeth) and elongated griffe with two teeth at the tip (Fig. 3). Labral chaetotaxy: 2/2334.

Dorsal chaetotaxy as in Fig. 1, plurichaetotic, with serrated mesochaetae, with long sensory setae s. Their formula per half tergum: 022/22211. Microsensilla on thoracic tergum II present. Head with seta a0, c1, c2 and c5. Thoracic tergum I with 4+3 (in holotype), 3+3 (in paratype) setae. Ab-



Figs 1 – 6. *Cassagnella sergioi* (NAJT, 1973) comb. nov. 1 – dorsal chaetotaxy; 2 – antennal segments III-IV dorso-laterally; 3 – maxillum; 4 – postantennal organ and eyes; 5 – tibiotarsus III; 6 – dens and mucro.

dominal terga I-III with seta s1 = seta p5, seta s2 = seta p8. Thoracic sterna without setae. Ventral tube with 4+4 setae, abdominal sternum I without setae, abdominal sternum II with 5+5 setae, abdominal sternum III with 5+5 setae.

Furca well developed with 6 setae on each dens (Fig. 6). Mucro straight. Tenaculum with 3+3 teeth. Only juvenile males known, without secondary sexual characters. Each anal valve with three setae hr.

Tibiotarsi I, II and III with 19, 19 and 18 setae, respectively, with slightly capitate seta A1; setae B4 and B5 long, slightly curved and capitate at the tip; seta B7 absent on tibiotarsus III. Femora I, II and III with 13, 12 and 11 setae, trochanters I, II and III with 6, 6 and 6 setae, coxae I, II and III with 3, 7 and 7 setae, subcoxae "2" I, II and III with 0, 2 and 2 setae, subcoxae "1" I, II and III with 1, 2 and 3 setae, respectively. Claw with inner tooth at half length of its inner edge, with pair of lateral teeth (Fig. 5). Empodial appendage absent.

Type material. Holotype and 3 paratypes (in which 2 juvenile males): in Museo de La Plata, Argentina (n 3461).

Type locality. Argentina, Isla de Los Estados, Bahía Capitán Cánepa, 2.v.1971, lgt. R. A. RONDEROS and L. A. BULLA.

Discussion. *Cassagnella sergioi* NAJT, 1973 differs from *C. anomala* (WOMERSLEY, 1933) by the presence of the inner tooth on each claw, by the shape of internal sensilla in sensory organ of antennal segment III (globular in *C. sergioi* and bent in *C. anomala*), ocelli on dark ocular fields, in the number of vesicles in postantennal organ (10 vesicles in *C. sergioi* and 12 in *C. anomala*), by the presence of dark pigmentation on ocular fields (absent in *C. anomala*). *C. sergioi* differs from *C. alba* NAJT & MASSOUD, 1974 in the following characters: pigmentation in the body (present in *C. sergioi* absent in *C. alba*, except eyes), position of setae s1 on abdominal terga I-III (s1 = p5 in *C. sergioi* and s1 = p4 in *C. alba*), number of setae on subcoxa "1" (two in *C. sergioi* and three in *C. alba*) and number of setae on abdominal sternum II (5+5 in *C. sergioi* and 3-4+3-4 in *C. alba*) and sternum III (5+5 in *C. sergioi* and 7-8+7-8 in *C. alba*).

Key to the species of *Cassagnella* NAJT & MASSOUD, 1974

1. Pigmentation of body present 2
- Pigmentation of body absent, except ocular fields, claws with internal teeth, sensory organ of antennal segment III with two bent (in the opposite direction) internal sensilla, postantennal organ with 10 vesicles *Cassagnella alba* (NAJT & MASSOUD, 1974), South Australia
2. Claws without inner tooth, sensory organ of antennal segment III with two bent (in the same direction) internal sensilla, postantennal organ with 12 vesicles, ocelli not on darkly pigmented fields *Cassagnella anomala* (WOMERSLEY, 1933), South Australia
- Each claw with inner tooth, sensory organ of antennal segment III with two globular internal sensilla, postantennal organ with 10 vesicles, ocelli on dark ocular fields *Cassagnella sergioi* (NAJT, 1973), South America

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